

ABSTRACT

BACKGROUND:

Patients with periodontal disease have differences in the protein composition of whole saliva, which reflects the nature and amplitude of the host response to a periodontal microbial challenge.

Amylase and Mucin displays inhibitory activity against micro-organisms and enhances the protective potential of saliva.

To know whether laboratory estimation of amylase and mucin can be used as a reliable biochemical marker to evaluate the progression of periodontal disease.

AIM:

The aim of this study is to compare the quantitative levels of salivary amylase and mucin before and after scaling and root planing in patients with chronic generalised periodontitis patients.

MATERIALS & METHODS:

A total number of 40 subjects (20 with Periodontally healthy volunteers and 20 with Chronic generalised periodontitis of 25-65 yrs were included in the study. After getting the informed consent signed, all the individuals participated in the study were subjected to measurement of clinical parameters such as OHI-S, Gingival index, Probing depth, CAL and then saliva sample collection was done and analysed for Amylase, Mucin levels by Semi auto analyser, Spectrophotometer respectively. The clinical parameters, salivary amylase and mucin levels were re-evaluated after 45 days following phase I periodontal therapy.

The results were statistically analysed using Independent samples t-test, Paired samples t-test, and Karl Pearson's correlation analysis.

RESULTS:

At baseline, salivary amylase and mucin levels were significantly high in patients with Chronic generalised periodontitis with increase in clinical parameters such as OHI-S, Gingival index, Probing depth, CAL when compared with periodontally healthy individuals. The salivary amylase and mucin levels were significantly reduced following phase I periodontal therapy along with improvement in clinical parameters, thus exhibiting a positive correlation between clinical parameters with both salivary amylase and mucin levels and also there was positive correlation between salivary amylase and mucin levels pre-operatively as well as post-operatively. P values from statistical tests presented were found to be statistically significant at $P\text{-value} < 0.001$.

CONCLUSION:

Within the limitations of the present study, It could be concluded that amylase and mucin levels in saliva can be used for the diagnosis of active phase of periodontal disease and to detect treatment outcomes following periodontal phase I therapy.